

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2004-357-W/S

IN RE:

Application of Carolina Water Service,
Inc. for adjustment of rates and charges
and modification of certain terms and
conditions for the provision of water and
sewer service.

REBUTTAL TESTIMONY
OF
BRUCE T. HAAS

Q. ARE YOU THE SAME BRUCE T. HAAS THAT HAS PREFILED DIRECT TESTIMONY IN THIS CASE?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS PROCEEDING, MR. HAAS?

A. The purpose of my rebuttal testimony is to address the comments our customers made during three of the night hearings in this matter and to respond to portions of the testimony of witnesses for the Office of Regulatory Staff.

Q. YOU MENTIONED THREE NIGHT HEARINGS, BUT IS IT NOT CORRECT THAT FOUR NIGHT HEARINGS IN THIS MATTER HAVE BEEN SCHEDULED?

A. That is correct. However, the fourth night hearing in this matter is scheduled for May 2, 2005, which is five days after our rebuttal testimony is due to be pre-filed and less than forty-eight hours before the public hearing scheduled for May 4, 2005.

1 **Q. HOW, THEN, DOES THE COMPANY INTEND TO RESPOND TO CUSTOMER**
2 **COMMENTS AT THE FOURTH NIGHT HEARING IF IT IS NECESSARY FOR**
3 **THE COMPANY TO DO SO?**

4 A. If it becomes necessary, I intend to offer oral rebuttal testimony under oath
5 pertaining to any customer comments issues raised at that night hearing.
6

7 **Q. MR. HAAS, DID YOU HEAR THE COMMENTS OF SEVERAL WITNESSES**
8 **DURING THE NIGHT HEARINGS COMPLAINING REGARDING ODORS**
9 **EMANATING FROM THE WASTEWATER TREATMENT FACILITIES**
10 **SERVING THEM?**

11 A. Yes, I did.
12

13 **Q. WHAT IS THE COMPANY'S RESPONSE TO THESE COMMENTS?**

14 A. Initially, I would note that odor from wastewater treatment facilities is no
15 phenomenon as, by the very nature of the business and process, unpleasant aromas will
16 from time to time be emitted from sewer utility plants. It simply cannot be avoided.
17 However, the extent and frequency of the odor varies based upon a variety of factors.
18 The proximity of a sewer facility to customer premises has a large impact on the
19 situation, with odor being more frequently noticed by some customers than others. Some
20 of our facilities are in the subdivision proper where they were placed and put into
21 operation by the original developer before we acquired the systems. That is certainly the
22 case with our Friarsgate, Watergate, and Kings Grant systems. And in some instances,
23 odor is more noticeable as customers move about the area on foot. The weather and
24 atmospherics can also play a part in the pervasiveness of odor, particularly when
25 customers are out of doors. I think this was borne out in the comments of customers or
26 others at the night hearings, some of whom stated that they had no complaint about odor
27 when others living in or near the same subdivision did have such complaints. This is also
28 borne out by the system inspection reports submitted by the ORS in this case as exhibits
29 to Mr. Morgan's testimony. For example, the ORS report of its inspection of the

1 Company's Friarsgate plant noted that odor at the plant facility was prevalent, but none
2 was noted outside the plant boundary. By contrast, several persons stated at the night
3 hearing in Irmo that odor outside the plant is a problem. In other instances, ORS noted
4 no odor at all. And, there is also the subjective element of customer opinion on this issue
5 which has to be taken into account; what may be an unreasonable level of odor to some
6 may not be unreasonable to others. Finally, even though some customers have expressed
7 dissatisfaction over the frequency with which sludge hauling trucks visit our plants, the
8 Company must remove sludge from our treatment facilities in order to continue operating
9 them in a safe and efficient manner and to comply with environmental regulations. When
10 these trucks enter and leave our facilities, it is possible that a negligible amount of odor
11 will spread to the surrounding areas. Our ability to abate odor – which is a costly
12 undertaking – is often dictated by one or more of these factors.

13
14 **Q. WHY IS ODOR ABATEMENT CONTROL A COSTLY UNDERTAKING?**

15 **A.** To begin with, in almost all of the cases involving odor issues, the facility consists
16 in whole or in part of aeration ponds or equalization basins. Depending upon the amount
17 of rain and the atmospheric conditions, odor can develop more easily and quickly at these
18 types of facilities than any other. One obvious alternative is to eliminate the treatment
19 facility altogether by interconnection into regional facilities as has been suggested by
20 some of the customers at the night hearings. However, in addition to the impact on rate
21 base that results from interconnection costs and the addition of extraordinary retirement
22 expenses when a working treatment facility is eliminated, the bulk treatment costs
23 incurred with the regional facility must be passed on to customers. In many cases, the
24 customers do not wish to pay rates which will recover these additional costs.

25 Another alternative is to enhance odor abatement efforts at these type facilities.
26 As was noted in my earlier testimony, the Company has already undertaken such efforts
27 at its Watergate facility where we have recently installed upgraded aeration equipment in
28 the digesters and aeration basins, a vapor-phase odor neutralizer system, and added more
29 chemicals. These improvements were placed into operation on April 21, 2005 and we

1 have also apprised the president of the Lands End Homeowners Association, Ms. Maxine
2 Bass, of these improvements. Additionally we have ordered a patented closed-cell,
3 polyethylene foam, permeable floating cover to place on top of the equalization basin
4 which is manufactured by Environmental Fabrics in Gaston, South Carolina. This
5 floating cover should further enhance odor control. And, additional upgraded aeration
6 equipment for the aeration basin has also been acquired. We anticipate having this cover
7 and the additional aeration equipment installed within the next month. When completed,
8 the Company will have invested approximately \$135,000 in these improvements to
9 further abate odor at our Watergate facility.

10 As the ORS inspection report reflects, efforts were also already underway by the
11 Company to further abate odor at our Friarsgate facility. Equipment similar to that
12 already installed at our Watergate facility was put into service on April 22, 2005 at the
13 Friarsgate facility. In addition, the aeration diffusers in both of the digester tanks at
14 Friarsgate have been replaced with upgraded fine-bubble diffusers to further enhance
15 odor abatement. The additional equipment installed at Friarsgate cost approximately
16 \$30,000.00 to acquire and install. We have also communicated these improvements to
17 Irmo Town Councilman Paul Younginer, along with DHEC and ORS Staff.

18 Until the night hearing in Summerville, the Company was not aware that odor was
19 as significant of an issue at Kings Grant Subdivision as some of the witnesses indicated.
20 However, we have reexamined our operations and considered the alternatives for that
21 facility to address the issue. We have purchased fine-bubble diffusers to upgrade the
22 existing aerators at that treatment plant, which will be installed on or about May 3, 2005.

23
24 **Q. WILL THESE EFFORTS GUARANTEE THE ELIMINATION OF ODOR?**

25 **A.** No, they will not. As I stated, our ability to abate odor is to a certain extent
26 dictated by the type of system, its proximity to residential areas, sludge removal
27 requirements, atmospheric conditions and customer perceptions. Odor cannot be
28 eliminated. Of course, it is our desire that our customers not be subjected to offensive
29 odors to the greatest extent possible and we are committed to conducting our business in

1 a manner which will give us an opportunity to attain that goal. However, in some
2 instances, it is not practicable to expect that we can do that – even with the significant
3 additional expenses of the type I just described.
4

5 **Q. DOES THE EXISTENCE OF ODOR EFFECT THE ADEQUACY OF THE**
6 **COMPANY'S SEWER SERVICE?**

7 **A.** No, it does not. The Company's sewer facilities are adequate to provide service
8 to all of our customers and there have been no instances where service has been
9 unavailable to meet the needs of our customers as a result of odor or any other reason.
10

11 **Q. MR. HAAS, DID YOU ALSO HEAR THE COMMENTS OF CUSTOMERS AT**
12 **THE NIGHT HEARING CONCERNING THE IMPACT OF THE COMPANY'S**
13 **EFFLUENT DISCHARGE INTO THE SALUDA AND ASHLEY RIVERS?**

14 **A.** Yes, I did.
15

16 **Q. WHAT IS THE COMPANY'S RESPONSE TO THOSE COMMENTS?**

17 **A.** First, I would like to point out that both of these discharges are permitted by
18 DHEC and that neither of them are the subject of any enforcement action pertaining to
19 compliance with permit limitations. In other words, the effluent is meeting the limits of
20 our DHEC permits for discharge into these two rivers.

21 Second, the Company is only one of numerous utility (governmental and private)
22 and industrial dischargers in both rivers.

23 Thirdly, the Company takes issue with the complaints regarding the location of
24 our discharge lines. With respect to the discharge of our Friarsgate treatment plant into
25 the Saluda River near the Saluda Shoals Park, I would point out that this effluent outfall
26 line has been there for more than twenty five years. The park, on the other hand, was
27 only opened in 1999. I would submit that if the location of the discharge outfall was a
28 problem, the park would either not have located its facilities in that area or would have
29 contacted the Company to address their concerns. They have not. I would further note

1 that even with the presence of our outfall line, this portion of the Saluda River was
2 designated as a trout "put-grow-and take" river by DHEC – a designation which still
3 applies. As recently as December of 2001 the Department of Natural Resources stocked
4 the lower Saluda River with 14,000 brown and rainbow trout by way of a helicopter drop.
5 There may have been subsequent stockings. If there was any impairment to the river
6 from outfall lines, I doubt that this stocking of trout would occur. With respect to the
7 discharge of our Kings Grant facility into the Ashley River, our effluent outfall line is
8 located downstream from the marina. Even if the effluent did not meet our permit limits,
9 which it does, there would be no danger associated with landing a boat at the marina
10 since effluent does not float upstream. In both cases, the relocation of the effluent outfall
11 lines would require massive capital outlays which would have to be passed on to
12 customers in our rates. Moreover, such an effort may not be realistic since the Company
13 would have to undertake to acquire new easements and rights of way for that purpose.
14 There is no guarantee that such an undertaking would be successful or permitted by
15 DHEC.

16
17 **Q. MR. HAAS, WOULD NOT INTERCONNECTING WITH LARGER UTILITIES**
18 **BE AN OPTION TO ADDRESS CUSTOMER CONCERNS WITH THE**
19 **LOCATION OF OUTFALL LINES?**

20 **A.** It certainly is an option that the Commission can consider and the Company does
21 have interconnections with various public utility systems. However, that option will
22 always require consideration of an interconnection agreement by the Commission.
23 Oftentimes, local government bulk treatment rates are of a level that makes
24 interconnection an uneconomic prospect for our customers. The local government
25 utilities have no incentive to offer bulk service rates that are equivalent to the rates they
26 charge their own citizens since there is no regulation of local government utility rates by
27 this Commission. To the contrary, I understand that the Supreme Court ruled in a case
28 called *Sloan v. City of Conway* that a city was not obligated to charge reasonable water
29 service rates to its customers residing outside the city limits and had an obligation to sell

1 water outside the city limits at the highest price obtainable. Against this backdrop, it is
2 easy to understand why local government utilities feel uncompelled to offer reasonable
3 rates for bulk service. As the Commission may be aware, there is legislation pending
4 before the General Assembly which would require that municipal utilities providing
5 water service outside their jurisdictional limits to charge the same rates to both in city and
6 outside of city customers. I have attached a copy of this legislation as "BTH Rebuttal 1."

7 The Company supports that legislation as a possible means of addressing interconnection.
8 The Commission may also be aware that in past legislative sessions, there have been
9 efforts to amend Code Section 58-5-30 so as to permit the Commission to regulate
10 municipal utility service rates when service is provided beyond city limits. This, too,
11 would address the issue of impact on customers of the costs of interconnection and would
12 be legislation that we would support.

13
14 **Q. MR. HAAS, DID YOU HEAR CUSTOMERS AT THE NIGHT HEARING IN**
15 **YORK COUNTY COMPLAIN ABOUT WATER QUALITY?**

16 **A.** Yes, I did.

17
18 **Q. WHAT IS THE COMPANY'S RESPONSE TO THOSE COMPLAINTS?**

19 **A.** Given the Company's many efforts to address this issue – which has been
20 documented in several proceedings before the Commission – these complaints fail to give
21 the Commission a complete picture of the circumstances surrounding the source and
22 quality of our water service in River hills.

23
24 **Q. WOULD YOU PLEASE ELABORATE?**

25 **A.** Yes. The River Hills Community Association complained for many years about
26 the quality of the well water that had been supplied since the inception of the system by
27 the developer in 1977. As the Commission is aware, groundwater taken from wells can
28 have mineral content characteristics that often cause the water to be discolored.
29 Discoloration can lead to staining of clothes, plumbing fixtures and appliances. Filtration

1 at the well and at the customer premises may alleviate the problem, but these are high
2 cost and high maintenance solutions for both the utility and the customer. This was the
3 case in River Hills, and, as a result, the customers and the River Hills Community
4 Association began to request that we obtain bulk water from a surface treatment source.
5 The customers also expressed a desire for the Company to eliminate the wastewater
6 discharge into Lake Wylie from our wastewater treatment plant in River Hills. At the
7 time, York County had not yet commenced construction of a county-wide system, but
8 was willing to include bulk service lines and mains to serve River Hills in its plans only if
9 the Company would purchase both bulk water and sewer. Therefore, in 1992, and at the
10 urging of the River Hills Community Association, the Company entered into an
11 agreement to purchase bulk water and sewer service from York County when it
12 completed construction of its county-wide water and sewer systems. This agreement was
13 approved by the Commission on July 10, 1992 in its Order Number 92-537 in Docket
14 Number 92-123-W/S.

15
16 **Q. HAS THE RIVER HILLS COMMUNITY ASSOCIATION SUPPORTED THE**
17 **ARRANGEMENT WITH YORK COUNTY SINCE THAT TIME?**

18 **A.** Not on a consistent basis. After the interconnection was completed, the Company
19 applied to the Commission to put into effect in River Hills our previously approved tariff
20 provisions under which we reduce our rates, but add on and pass through, without
21 markup to our customers, the bulk charges imposed by governmental utility service
22 providers. Even though it had urged the Company to interconnect with York County and
23 supported the agreement approved by the Commission in 1992, the River Hills
24 Community Association actually intervened in the 1996 proceeding when we sought to
25 implement the pass-through rate structure with respect to York County's bulk service
26 charges. When it became clear that the Company could be relieved of its obligations to
27 purchase surface treated water from York County if the Commission were to not approve
28 the pass-through rate structure in River Hills, the River Hills Community Association
29 withdrew its opposition. The application was approved by the Commission in its Order

1 Number 96-590, which was issued on August 26, 1996 in Docket Number 96-040-W/S.
2 In its motion to withdraw its intervention, in that docket River Hills Community
3 Association acknowledged that the effect of the York County pass-through would be a
4 higher overall service bill, but indicated that it preferred to have the bulk water service
5 that the York County agreement with Company insured. (BTH Rebuttal 2).
6

7 **Q. DID THAT RESOLVE THE MATTER WITH THE RIVER HILLS**
8 **COMMUNITY ASSOCIATION?**

9 **A.** Unfortunately, no. In 1997, the River Hills Community Association and other
10 customers. Filed a complaint with the Commission seeking to have our rates reduced.
11 We defended against the complaint, in part on the grounds that the complainants had all
12 been well aware of the rate structure when the Company's agreement with York County
13 was approved by the Commission in 1992 and when the rate structure was implemented
14 in 1996. The Commission issued two orders in the 1997 complaint case in which it did
15 not find that our rates were unjust or unreasonable, but did direct us to cap sewer charges
16 for residential customers in River Hills at 10,500 gallons of water consumed on a
17 monthly basis. The Commission found, based upon the arguments advanced by the
18 customers, that much of the water that they consumed was not returned to the wastewater
19 treatment system but was dispersed in the course of various outdoor activities – primarily
20 landscaping irrigation.
21

22 **Q. WHAT HAPPENED AFTER THAT?**

23 **A.** We appealed the Commission's orders to the Circuit Court and continued to
24 charge the previously approved rates under bond. The case was ultimately settled while
25 on appeal. In its Order Number 1999-245 in Docket Number 97-464-W/S dated April 2,
26 1999, the Commission rescinded its prior two orders requiring a sewer rate cap. In
27 exchange, the Company agreed to permanently waive plant impact and connection fees
28 totaling \$500 for any residential customer in River Hills Subdivision that desired to
29 install an irrigation meter. We also agreed to provide the irrigation meter to the customer

1 at no charge and to provide a meter box at our cost. Under the terms of this settlement,
2 customers are responsible for installation of the meters.

3 **Q. IN ADDITION TO THE SAVINGS THAT CUSTOMERS REALIZE FROM NOT**
4 **HAVING TO PAY THE PLANT IMPACT FEE, THE CONNECTION FEE, AND**
5 **THE COST OF A METER, DID THE CUSTOMERS IN RIVER HILLS REALIZE**
6 **ANY OTHER BENEFITS FROM THIS SETTLEMENT?**

7 **A.** Yes. As the Commission pointed out in its order, the settlement provided
8 customers an opportunity to reduce their sewerage charges by reducing water
9 consumption through their regular residential meter. In addition to these benefits, under
10 the terms of the 1992 bulk service agreement between the Company and York County, a
11 tap fee cannot be charged by York County for installation of an irrigation meter in River
12 Hills. So, in effect, for the cost of having a meter installed, the customers in River Hills
13 can greatly reduce their sewer bills.

14
15 **Q. WAS RIVER HILLS COMMUNITY ASSOCIATION ALLOWED TO HAVE**
16 **INPUT INTO THE TERMS OF THIS SETTLEMENT?**

17 **A.** Absolutely. It was represented by counsel and the settlement was submitted to the
18 Association for its review – even though it was not a party to the appeal. In fact, Mr. Bob
19 Harrington, who was then the Director of Utilities for River Hills Community
20 Association, submitted comments to the Commission regarding the terms of the
21 settlement which were incorporated therein.

22
23 **Q. HAVE THERE BEEN WATER QUALITY ISSUES IN RIVER HILLS**
24 **SUBSEQUENT TO THE INTERCONNECTION WITH YORK COUNTY?**

25 **A.** Yes, there have. In August of 1999, we experienced problems with the quality of
26 the water which was being supplied by York County. Specifically, the County's bulk
27 water supplier, the Town of York, had a malfunction at its Lake Caldwell reservoir
28 which, combined with the effects of a summer long drought that year, resulted in the
29 reservoir level dropping below the intake valve on the Town's treatment plant. As a

1 result, the water contained debris and was of an unacceptable aesthetic quality. DHEC
2 tested the water and found it to comply with the minimum drinking standards, but our
3 customers were not satisfied. This condition lasted for approximately several months.
4

5 **Q. WERE COMPLAINTS MADE TO THE COMMISSION BY THE COMPANY'S**
6 **CUSTOMERS ABOUT THIS MATTER?**

7 **A.** Yes. According to our review of Commission records, of the twenty seven
8 complaints filed with the Commission in 1999 regarding service in River Hills, twenty
9 six related to the water quality issue arising from the York County bulk water source
10 problem. All but one of these complaints were filed between August 24, 1999 and
11 August 31, 1999. The other was filed on September 30, 1999.
12

13 **Q. WHAT ACTION DID THE COMPANY TAKE IN RESPONSE TO THESE**
14 **COMPLAINTS?**

15 **A.** Of course, we complained to York County. We advised York County that the
16 Company intended to resume the use of our wells in River Hills if it could not deliver
17 water of an aesthetic quality that was satisfactory to our customers. Several of our
18 customers suggested that course of action.
19

20 **Q. WHAT RESPONSE DID YORK COUNTY MAKE TO THAT?**

21 **A.** York County promptly arranged for an emergency water interconnection with the
22 City of Rock Hill. Of course, the Company had to flush out its systems to eliminate the
23 poor quality water, which took approximately two weeks. Once that was accomplished,
24 the water quality began to improve dramatically. In fact, I am unaware of any quality
25 complaints to the Commission from the River Hills customers since that time. The
26 county's interconnection with the City of Rock Hill is now permanent.
27

28 **Q. DID THE COMPANY TAKE ANY OTHER STEPS TO ADDRESS THE**
29 **CONCERNS OF THE CUSTOMERS IN RIVER HILLS?**

1 A. Yes. I wrote to York County and asked that the bulk service charges that had
2 been imposed for the period in question be refunded to our customers. By letter dated
3 February 29, 2000, York County advised the Company that our request was granted and
4 credited to our bulk service account a total of \$12,902.34 (BTH Rebuttal 3). We in turn
5 refunded that amount to customers by way of bill credits.
6

7 **Q. HAS THE WATER SOURCE QUALITY ISSUE BEEN FINALLY RESOLVED**
8 **WITH YORK COUNTY?**

9 A. I believe so. Although there were a few complaints regarding water taste and
10 aesthetics at the night hearing in York County, the water source serving River Hills is
11 surface treated water. I am not aware of any complaints to the Commission in that regard
12 over the last several years and there should not be any deposits in or spotting from the
13 water since it is surface water. If customers do experience that, they need to contact us so
14 we can investigate.
15

16 **Q. IS THERE ANY OTHER AVENUE AVAILABLE TO THE CUSTOMERS IN**
17 **RIVER HILLS TO SEEK RELIEF FROM THE CHARGES THEY PAY FOR**
18 **WATER AND SEWER SERVICE?**

19 A. Yes, there is and it was specifically mentioned at the night hearing. As Mr.
20 Lubertozzi notes in an exhibit to his rebuttal testimony, the bulk rates charged by York
21 County contribute to slightly more than half of the bill a customer receives from the
22 Company. The impact of York County's bulk rates on customer bills in River Hills is not
23 a new topic to the Commission. In his testimony in the 1997 complaint case brought by
24 River Hills Community Association, the Commission's Deputy Executive Director Gary
25 Walsh testified that the cause of the higher rates in River Hills then was increases in bulk
26 water rates by York County. (BTH Rebuttal 4). In Order Number 98-384, the
27 Commission acknowledged Mr. Walsh's testimony that the increase in service rates was
28 attributable to York County's increase in bulk rates. That remains the case today. Since
29 1998, York County has twice more increased its rates as York County Manager Al Green

1 acknowledged at the night hearing. Today, York County charges a bulk water rate of
2 \$3.26 per thousand gallons. These rates are substantially higher than what the Company
3 pays our other bulk water service providers, which \$2.08, \$2.21 and \$2.45 per thousand
4 gallon for the Town of Lexington, Lexington County Joint Municipal, and City of West
5 Columbia, respectively. Similarly, the bulk sewer service rate charged by York County,
6 which is \$3.64 per thousand gallons of water consumed, is significantly higher than those
7 charged by the majority of the Company's other bulk sewer service providers.
8 Respectively, we are charged \$11.00 and \$17.55 per thousand gallons of water consumed
9 by Richland County and the Town of Chapin. Base on average consumption of thousand
10 gallons 5,919, Riverhills customers pay \$21.55 in bulk sewer charges to York County.
11 Customers in River Hills have a very direct avenue to seek relief in this regard, and that is
12 to contact their representatives on the York County Council and ask them why York
13 County's bulk rates are higher than those charged other governmental entities. Since the
14 customers have the ability to vote for members of the council, they are in a position to
15 demand relief in that arena.

16
17 **Q. ARE YOU AWARE OF ANY EFFORT IN THAT REGARD BY THE RIVER**
18 **HILLS COMMUNITY ASSOCIATION?**

19 **A.** No, I am not. But if the Association were to do so, the Company would be more
20 than happy to make available to them information verifying the lower bulk service rates
21 charged to us and passed on to our customers in other areas of the state.

22
23 **Q. MR. HAAS, SINCE THE COMMISSION APPROVED THE COMPANY'S**
24 **WATER AND SEWER INTERCONNECTION AGREEMENT WITH YORK**
25 **COUNTY, HOW MANY TIMES HAS THE COMPANY SOUGHT AND**
26 **RECEIVED RATE RELIEF?**

27 **A.** Twice. We filed an application in 1993 in Docket Number 93-738-W/S and the
28 Commission granted a rate increase in Order Number 94-484. However, the Company
29 was not allowed to put into effect the pass-through provision for York County's bulk

1 charges until 1996 in Order Number 96-590, Docket Number 96-040-W/S. The other
2 application was made in 2000 in Docket Number 2000-207- W/S which resulted in our
3 rates approved in Order Number 2001-887. I would note that, by contrast, and as Mr.
4 Greene testified at the night hearing, York County has increased its rates on at least four
5 occasions, the last being in 2001.
6

7 **Q. SEVERAL CUSTOMERS HAVE STATED TO THE COMMISSION THAT THE**
8 **COMPANY'S RATES ARE OUT OF PROPORTION TO RATES THAT THEY**
9 **HAVE BEEN CHARGED IN OTHER JURISDICTIONS; WOULD YOU PLEASE**
10 **COMMENT ON THAT?**

11 **A.** Yes. We do not believe that it would be appropriate for the Commission to set
12 our rates based upon what some other entity may have charged to a customer. Even were
13 it appropriate, the Commission has no real basis upon which to make the necessary
14 comparison in this case. For example, many of the customers commenting failed to state
15 whether the other entities from whom they had purchased utility services were
16 governmental or private in nature. This makes a tremendous difference since
17 governmental entities have the ability to raise "cost-free" revenue by way of property
18 taxes. And, to the extent that they have to borrow money, most governmental entities
19 having bonding capacity which allows them to acquire debt capital at a much lower cost
20 than that which a private entity incurs in commercial capital markets. Also,
21 governmental entities have no obligation to their shareholders to make a profit, nor do
22 they pay any taxes. So, rates charged by governmental entities should be lower than
23 those of a private entity. Also, the Commission has no frame of reference regarding the
24 customer's usage patterns in other locations or the proximity of service sources to the
25 customers. Some of these customers may have been served by a governmental entity
26 whose facilities were in close proximity to the customer base.
27

28 **Q. WHY DOES THE PROXIMITY OF THE SERVING FACILITIES TO THE**
29 **CUSTOMER BASE HAVE A BEARING?**

1 **A.** If you can reduce the distance between the service point and the service source,
2 the underlying capital costs associated with transportation of water and sewer are
3 lowered. You can see the cause and effect component of this in the current bulk service
4 arrangement that the Company has with York County. York County gets its water from
5 the City of Rock Hill facilities and gets its sewer treatment from the City of Rock Hill
6 facility. The Company in turn gets its bulk service from York County for both water and
7 sewer. So, both the incoming water and the outgoing sewer have to travel quite a
8 distance. This is one of the reasons that York County's bulk rates to the Company are as
9 high as they are.

10 **Q. MR. HAAS, WHAT IS THE COMPANY'S RESPONSE TO THE ASSERTION BY**
11 **RIVER HILLS CUSTOMERS THAT THEIR RATES ARE ALREADY "TOO**
12 **HIGH" AND THAT THE REQUEST FOR RATE RELIEF SHOULD BE DENIED**
13 **FOR THAT REASON?**

14 **A.** The Commission should view this assertion in its proper context. Knowing what
15 the rates would be if the Company interconnected with York County, but desiring an
16 interconnection for surface water from York County, the River Hills Community
17 Association, YMCA Camp Thunderbird, and other customers withdrew their opposition
18 to the Company's interconnection with the County in the 1996 proceeding I mentioned.
19 In Docket Number 97-464-W/S, a number of organizations we serve in York County,
20 including RHCA, complained that our service rates were too high and should be reduced
21 by the Commission. In Order Number 98-384, the Commission acknowledged the Staff's
22 testimony that the increase in service rates was attributable to York County's increase in
23 bulk rates. The Commission effectively rejected RHCA's claim in that regard since it
24 never ordered any change in our service rates in any of the orders in that docket. In our
25 last rate case, RHCA again asserted that the Company's rates were "too high" to justify
26 an increase and the Commission, again, did not accept that argument. It should do so
27 again. There is no basis for denying rate relief simply because customers think rates are
28 too high. And, given the impact of York County bulk rates on the picture, reliance upon

1 subjective customer comments to inform the Commission's decision would not result in a
2 determination of just and reasonable rates.

3
4 **Q. MR. HAAS, HAVE YOU REVIEWED THE TESTIMONY OF ANY OF THE**
5 **WITNESSES FOR THE OFFICE OF REGULATORY STAFF?**

6 **A.** Yes, I have reviewed Mr. Morgan's and Ms. Hipp's testimonies and a portion of
7 Ms. Scott's testimony and would like to make a few observations in response.

8
9 **Q. WITH RESPECT TO MR. MORGAN'S TESTIMONY, WHAT OBSERVATIONS**
10 **DO YOU HAVE?**

11 **A.** My observations are addressed to certain of the comments made by Mr. Morgan
12 with respect to the specific facilities included in his report that is attached to his
13 testimony as Exhibit WJM-2. I have set forth my observations in my "BTH Rebuttal 5"
14 that is attached hereto.

15
16 **Q. WHAT COMMENTS DO YOU HAVE ON MS. HIPPI'S TESTIMONY?**

17 **A.** Ms. Hipp states that the Company has failed to comply with Commission
18 regulations R. 103-514 and R. 103-714 because we have not supplied to the Commission
19 or ORS copies of notices of violation issued to the Company by the South Carolina
20 Department of Health and Environmental Control, or DHEC. I disagree with her on this
21 point for several reasons. First, by their own terms, both of the regulations apply only
22 where the violation noticed affects the service to a customer. It is certainly possible for a
23 utility to have a violation of Commission or DHEC rules that has no affect on service to a
24 customer. And, the Company has received no notices from DHEC regarding alleged
25 violations that have had an affect on our ability to serve a customer. I believe that the
26 Commission has recognized this fact in its prior rate case and other orders involving the
27 Company since the Commission has certainly been made aware that the Company has
28 had fines imposed on it by DHEC, but has not criticized the Company for not having

1 filed a copy of the pertinent notice of violation. Second, there is nothing in either
2 regulation obligating the Company to file any notice of violation with ORS.
3

4 **Q. WHAT OBSERVATIONS DO YOU HAVE WITH RESPECT TO MS. SCOTT'S**
5 **TESTIMONY?**

6 **A.** My only comments on Ms. Scott's testimony pertain to her proposed adjustment
7 to disallow expenses associated with additional operators and vehicles we will have to
8 add in order to comply with DHEC regulation R. 61-58.7.D (2). DHEC only recently
9 began enforcing this regulation and has advised the Company that we must employ
10 additional operators sufficient to monitor our groundwater treatment facilities on a daily
11 basis. Based upon the location and number of our groundwater facilities, the Company
12 determined that we needed seven additional persons for our operations staff. Although
13 we have already hired four additional persons for this purpose, we are advertising three
14 more positions and intend to have them filled as soon as possible. The Company is
15 required to hire these three additional operators and will do so. All seven of these new
16 personnel will require transportation in order to discharge their duties, which will include
17 being available on a twenty four hour basis, seven days a week. As evidence of our
18 commitment to make these additional hires, we have purchased the seven new vehicles
19 which Ms. Scott proposes be disallowed. Mr. Lubertozzi will address the accounting
20 aspects of this in his rebuttal testimony.

21 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

22 **A.** Yes, it does.

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8
9 **A BILL**

10
11 TO AMEND SECTION 5-31-1910, CODE OF LAWS OF
12 SOUTH CAROLINA, 1976, RELATING TO THE PROVISION
13 OF WATER AND ELECTRIC SERVICES BEYOND
14 CORPORATE LIMITS OF A MUNICIPALITY, SO AS TO
15 PROVIDE THAT A MUNICIPALITY REQUIRING A
16 CONTRACT BEFORE SERVICES ARE PROVIDED TO A
17 NONRESIDENT MUST PROVIDE THE SERVICE TO THE
18 NONRESIDENT AT THE SAME RATE CHARGED TO A
19 RESIDENT OF THE MUNICIPALITY.

20
21 Be it enacted by the General Assembly of the State of South
22 Carolina:

23
24 SECTION 1. Section 5-31-1910 of the 1976 Code is amended to
25 read:

26
27 “Section 5-31-1910. ~~Any city or town~~ A municipality in this
28 State owning a water or light plant ~~may~~, through the proper
29 officials of ~~such the~~ city or town, may enter into a contract with
30 ~~any a person without outside~~ the corporate limits of ~~such city or~~
31 ~~town the municipality~~ but contiguous ~~thereto to it~~ to furnish ~~such~~
32 ~~the~~ person electric current or water from ~~such the~~ water or light
33 plant of ~~such city or town the municipality~~ and may furnish ~~such~~
34 ~~the~~ water or light upon ~~such the~~ terms, rates, and charges as may
35 be fixed by the contract or agreement between the parties ~~in this~~
36 ~~behalf~~, either for lighting or for manufacturing purposes, when in
37 the judgment of the ~~city or town municipal~~ council it is ~~for in~~ the
38 best interest of the municipality ~~so to do so~~. ~~No such~~ This contract
39 ~~shall must not~~ be for ~~a longer period~~ more than two years but ~~any~~
40 ~~such the~~ contract may be renewed ~~from time to time for a like~~
41 ~~period~~. Notwithstanding another provision of law, a municipality
42 which enters into a contract for the provision of services pursuant

1 to this section must provide the service at the same rate as the
2 service is provided to a resident of the municipality.”

3

4 SECTION 2. This act takes effect upon approval by the Governor.

5

---XX---

6

POSTED
7/22/96

BEFORE

THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 96-040-W/S

S.C. PUBLIC SERVICE COMMISSION

RECEIVED
JUL 16 1996

ACCEPTED
Legal *CD* 7-18-96

IN RE: Request of Carolina Water Service, Inc.)	MOTION TO
for Recovery of Costs for Bulk Water)	WITHDRAW PETITION
and Sewer Services for River Hills)	TO INTERVENE
Service Area in York County,)	
South Carolina)	

Stephen F. Kelly, P.E. representing the River Hills Community, Inc., respectfully petitions the South Carolina Public Service Commission for permission to withdraw its petition to intervene in the above referenced Docket and represents as follows:

1. On February 12, 1996 Carolina Water Service, Inc. filed an Application requesting approval of a new schedule of rates and charges for its water and sewer service customers in South Carolina.
2. The Commission has assigned Docket #96-040-W/S to this matter.
3. Stephen F. Kelly, P.E. is duly appointed by the River Hills Community Association, Inc. to represent their interests in this hearing regarding the above named docket.
4. The River Hills Community Association, Inc. position is that:
 - A. On July 11, 1996 the Consumer Advocate's office was kind enough to forward a copy of page 35 of the order No. 94-484 dated May 31, 1994 with regard to the water distribution charge that states as follows:

".....The Company proposed to increase the water distribution charge of \$1.50/1,000 gallons to \$1.50/1,000 gallons for those customers for whom CWS may provide bulk water service. CWS has provided an exhibit (Hearing exhibit #2) which indicates that the cost of distributing purchased water, after receipt of an \$8.00/month BFC, is \$1.85/1,000 gallons based on average usage of 6,600 gallons/month per customer. This exhibit was not challenged at the hearing and the rate was fully justified.

S.C. PUBLIC SERVICE COMMISSION
RECEIVED
JUL 22 1996
UTILITIES DEPARTMENT

RETURN DATE: _____

SERVICE: _____

Therefore the Commission approves 1.85/1,000 gallons as a water distribution charge. (13.)

13. The increase to the water distribution charge is not applicable to Riverhills Subdivision. The appropriate water distribution charge for Riverhills Subdivision shall be considered in a separate proceeding at such time as a bulk water contract is filed with the Commission.....”

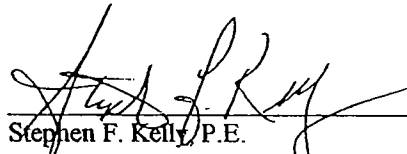
- B. The above order supersedes all other interpretations by individuals involved in the Docket.
- C. Carolina Water Service has continually (and accurately) and consistently maintained the position stated in item A above
- D. We have repeatedly asked for other interpretations as to the disposition of both the water distribution charges and the Bulk Service charges. The letter received from Ms. Becky Meacham (attached as Exhibit #1) was the first and only response received other than from CWS until the Consumer Affairs office provided a copy of the 1994 order.
- E. The only charges that appear to be addressable at this hearing are those of the Bulk Water & Sewer charges and not the Distribution Water and Sewer Charges.
- F. We have found ourselves to be in a position due to the above that places us in an adversarial position against the institution of Bulk Water & Sewer service if we continue to intervene.
- G. It is our faith in the Consumer Advocate's office (who has also intervened) and in the obligation of the South Carolina Public Service Commission to determine that the charges by York County are Fair and Reasonable as direct pass through to CWS customers..
- H. It is recognized that this Docket has the ability to destroy the very concept of a regional water system, alienate our neighbors, and hinder the growth of the entire region should the outcome of this hearing disallow the interconnect. We have as a community decided to take the position that the Commission will be fair in reviewing the County charges - while still realizing that the customer's overall water and sewer charges (combined distribution and bulk) will be increased tremendously. We continue to oppose the final effect of the combined distribution & bulk rate; however,

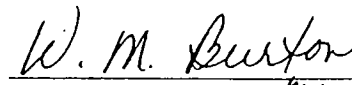
we feel the effects of disallowing the interconnect at this point (should that be a final result) would be far more disastrous.


- I. It is recognized that our opposition and therefore our intervention pertains to the distribution charges, services, and practices of the "Distributor", and all testimony would be considered irrelevant to this hearing - and probably properly so.
- J. Documentation with regard to the original Petition to Intervene can be reserved for separate action or updated for the next pending docket that pertains to the distribution charges and the "Distributor"

WHEREFORE, the Petitioner, in order to represent the best interests of the citizens of the River Hills Community Association, Inc., located in York County, South Carolina, requests:

1. that the Commission grants this Petition to withdraw its filed Petition to Intervene as a formal party of record on behalf of the River Hills Community Association, Inc.


Stephen F. Kelly, P.E.
Utilities Director
River Hills Community Association, Inc.
102 Hamilton's Ferry Road
P.O. Box 5007
Lake Wylie, S.C. 29710


W.M. Burton
President
River Hills Community Association, Inc.
102 Hamilton's Ferry Road
P.O. Box 5007
Lake Wylie, S.C. 29710


March 15, 1996

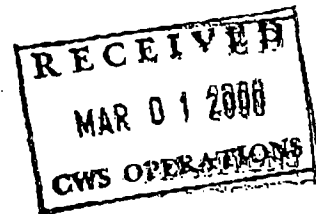


COUNTY MANAGER'S OFFICE

Post Office Box 66, York, South Carolina 29745

Tel: (803) 684-8511 • Fax: (803) 684-8550

February 29, 2000



Mr. Bruce Haas
Regional Manager
Carolina Water Service, Inc.
Post Office Box 240705
Charlotte, North Carolina 28224

Dear Bruce:


The York County Council recently considered the request made by your company for relief from charges for water received during late August and early September. In an effort to be responsive and responsible to our customers, the County Council approved your request and is providing a credit to all customer's accounts who received the poor quality water. Even though the problems were caused by a malfunction at the City of York's water treatment facility and it was beyond the County's control, we feel that our customers should be compensated in some manner.

We agree with the computation of the credit due your company as outlined in your request. For this reason your account has been credited in the amount of \$ 12,902.34. We are confident that you will find an equitable manner in which to pass this credit on to your retail customers.

We apologize for the inconvenience caused to your company and customers as a result of the poor quality water. We also appreciate your patience during the weeks in which you were dealing with the problem.

If there are any questions or if we can be of assistance in any way, please call.

Sincerely,


Al Greene
Interim County Manager

1 Q. MR. WALSH, WHY ARE THE RIVERHILLS CUSTOMERS CHARGES
2 LESS THAN SIMILAR CHARGES APPROVED FOR OTHER CWS
3 CUSTOMERS?

4 A. The Riverhills Subdivision was excluded from consideration in CWS's most recent
5 general rate case.

6 Q. MR. WALSH, ARE YOU AWARE OF ANY OTHER BULK AGREEMENTS
7 WHICH ARE IN PLACE IN AREAS SERVED BY CWS?

8 A. Yes, CWS has a number of customers in Richland and Lexington counties who are
9 receiving bulk water service today.

10 Q. WHAT WHOLESALE WATER RATE ARE THE CUSTOMERS IN
11 RICHLAND AND LEXINGTON COUNTIES PAYING TO THE
12 GOVERNMENT BODY OR AGENCY PROVIDING THE BULK WATER?

13 A. The CWS customers served through bulk water agreements in Richland and
14 Lexington county are paying a bulk water rate of \$1.90 per 1,000 gal.

15 Q. MR. WALSH, ARE YOU FAMILIAR WITH THE ISSUE REGARDING THE
16 INCLUSION OF A CAP OF 10,000 GALLONS OF WATER BEING
17 UTILIZED IN CALCULATING THE COUNTY'S SEWER TREATMENT
18 CHARGE?

19 A. Yes, the notice which was provided to all residential customers in the CWS service
20 area in York County reflected a \$3.47 per 1,000 gals. of water charge for sewer
21 treatment capped at 10,000 gallons of water consumption per month.
22 The notice in this matter was provided based on rates which were filed for
23 Commission approval in Docket No. 95-794-W/S. Subsequent to the notice being
24 provided, the Company withdrew its application in that docket. Therefore, the rates
25 currently in effect for residential customers in CWS's service territory in York
26 County are those approved by the Commission in Order No. 94-484.

27 Q. MR. WALSH, WHAT IS YOUR POSITION CONCERNING THE VARIOUS
28 COMPLAINTS RECEIVED FROM CWS CUSTOMERS IN YORK COUNTY
29 RELATED TO THE HIGH COST OF WATER AND SEWER SERVICE?

1 A. It is my position that the high cost of water and sewer service in the CWS service
2 area in York County is the result of the increasing cost of bulk water provided by
3 York County. At the time this Commission noticed the impact of receiving water
4 service under the bulk agreement, York County's wholesale charge was \$2.82 per
5 1,000 gals. Staff is now informed that the County has increased the wholesale water
6 rate from \$2.82 per 1,000 gals. to \$3.11 per 1,000 gals.

7 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

8 A. Yes, it does.



ORS WASTEWATER SYSTEM INSPECTION

Utility Name: Carolina Water Service, Inc. Number of Customers: -3244
 System Type: Collection and Treatment System Date Inspected: March 17, 2005
 Inspected By: Willie Morgan/Barry Morris Subdivision Name: Friarsgate
 Office of Regulatory Staff Lexington County, Richland County
 Company Representative: Mr. Dana L. Reeder
 Mr. Robert Gilroy/Bruce Haas
 Type of Plant: Collection and Biological Treatment System
 Extent of Treatment: Biological Treatment with Surface Water Discharge using NPDES permit (SC0036137)

System Components Inspected	Yes	No
Chlorinator	X	
Other Chemicals in Use	X	
Aerators	X	
Plant fenced and Locked	X	
Warning Signs Visible	X	
Holes in Fence ¹	X	
Erosion of Dikes		X
Odor ²	X	
Grass Cut	X	
Duck Weed or Algae		X
Grease Build Up		X
Debris inside of Plant		X
Color of Effluent ³ : Did not evaluate		
Lift Stations: Number 3	X	
Failure Warning System	X	
Electric Wiring Acceptable	X	
Overflows		X
Condition of Access Road: Good/Fair/Poor	Good	
New Construction		X

Frequency Checked by Licensed WWTF Operator: Daily

Location of Utility Office: 110 Queen Parkway, West Columbia, SC, 29169

Location of System: Lexington County - WWTF, Lexington & Richland County - Collection

Subdivision provided water by this Utility: No

Comments: Most of the homes served by the utility in the Friarsgate subdivision are located in Richland County. There are three lift stations located throughout the subdivision.

Influent is received at the WWTF via multiple influent pipes. The influent is received at a single holding lagoon. The wastewater is split and distributed to

CWS Comments: During the inspection of the facilities by ORS, it should be noted that the WWTP was in the process of being sandblasted and painted as part of our standard O&M process.

separate treatment areas (area #1 or area #2). The wastewater is then discharged to the single onsite disinfection unit. The wastewater is disinfected with chlorine gas in the disinfection chamber followed by a dechlorination process with sulfur dioxide. The treated wastewater is then discharged to the Saluda Shoals location on the lower Saluda River. This discharge point is approximately 7 miles from the WWTF.

- Footnotes:
1. A section of the fence located near the south part of the equalization basin needs to be repaired. An area approximately 50 feet wide is missing with a portion at each end being down.
 2. On the day of the inspection, sewerage odor was prevalent throughout the site of the WWTF around treatment area #1. However, there was no odor observed outside of the WWTF plant boundary. ORS has received several odor complaints about the CWS Friarsgate WWTF from neighboring residences. CWS has been working on the digester in an attempt to address the odor problem. The odor appears to be emanating from the area of the static bar screen, digester basin, and the influent bar screen equalization basin of treatment area #1 which is located on the left portion of the site after you enter the front gate.
 3. The actual discharge from the WWTF was not observed. However, the sampling point of the WWTF effluent was observed to have a distinct green algae color. This is located in the chamber immediately after the dechlorination process.

CWS Comments: 1) The section of fence was replaced shortly after the inspection by ORS. Mr. Morgan was advised of this prior to his pre-filing of testimony.

3

2) CWS Staff accompanying Mr. Morgan during his on-site inspection respectfully disagrees with his assertion that odor was prevalent throughout the site. Odors that were located at various points of the treatment area identified by Mr. Morgan as area #1 have been addressed by the installation of odor control equipment, along with the completion of upgrades to the aeration equipment located in each of the digesters.

3) The effluent being discharged from the WWTP was very clear and did not contain a distinct green algae color. However, the walls of the contact chamber do appear a darker green color, which may explain the comments made by Mr. Morgan.



ORS WASTEWATER SYSTEM INSPECTION

Utility Name: Carolina Water Service, Inc. Number of Customers: ~2609
System Type: Collection and Treatment System Date Inspected: March 16, 2005
Inspected By: Willie Morgan/Barry Morris Subdivision Name: (several S/D) I - 20
Office of Regulatory Staff Lexington County
Company Representative: Mr. Dana L. Reeder
Mr. Robert Gilroy
Type of Plant: Collection and Biological Treatment System
Extent of Treatment: Biological Treatment with Surface Water Discharge using NPDES permit (SC0035564)

System Components Inspected	Yes	No
Chlorinator	X	
Other Chemicals in Use (sulfur dioxide)	X	
Aerators 18	X	
Plant fenced and Locked ¹		X
Warning Signs Visible	X	
Holes in Fence		X
Erosion of Dikes		X
Odor		X
Grass Cut	X	
Duck Weed or Algae		X
Grease Build Up		X
Debris inside of Plant	X	
Color of Effluent:	Green	
Lift Stations: Number 15	X	
Failure Warning System	X	
Electric Wiring Acceptable	X	
Overflows		X
Condition of Access Road: Good/Fair/Poor	Good	
New Construction		X

Frequency Checked by Licensed WWTF Operator: Daily

Location of Utility Office: 110 Queen Parkway, West Columbia, SC, 29169

Location of System: Lexington County

Subdivision provided water by this Utility: Yes

Comments: The curtain in the 2 acre pond separating the oxidation process from the polishing process needs to be replaced. The estimated cost to replace the curtain is \$7800. Influent enters the oxidation area via gravity through 2 influent pipes. There remains an additional pipe in the oxidation area of the pond that has been abandon. The effluent is pumped to the sampling point on Devega Drive and is

5

CWS Comments: The replacement curtain/floating baffle wall is an order and scheduled to be installed upon receipt approximately May 15th.

discharged by gravity to the lower Saluda River. The condition of the road to the sampling point was fair. The discharge is located on the lower Saluda River at a point approximately 2 miles away from the WWTF.

The NPDES permit limit for the discharge has been approved for the proposed upgrade. However, Carolina Water Service has not submitted a Preliminary Engineering Report (PER) or any construction plans to DHEC for approval on the proposed upgrade to the WWTF.

The sewer pipe to the small office was damaged and needs repairing. It appeared that a mower had clipped the exposed corner of the exterior part of the drain for the restroom at the office.

Footnote:

1. The gate to the lift station at the small office was unlocked and open. Inside the fence is the small office, 100k gallon elevated tank, 2 generators on wheels, and a 99 gallon gas tank on a trailer with wheels.

CWS Comments: The sewer pipe at the small office was repaired within 24 hours of ORS inspection.

The gate at the small office located off of Mineral Springs Road is kept locked. In addition, the emergency portable generators and standby fuel trailer have all been secured to prevent unauthorized use.



ORS WASTEWATER SYSTEM INSPECTION

Utility Name: Carolina Water Service, Inc. Number of Customers: ~711
System Type: Collection and Treatment System Date Inspected: April 6, 2005
Inspected By: Willie Morgan/Barry Morris Subdivision Name: Kings Grant and Plantation
Office of Regulatory Staff Ridge in Dorchester County
Company Representative: Mr. Dana L. Reeder
Type of Plant: Collection and Treatment System

Extent of Treatment: Collection and treatment in aboveground tanks with discharge to the Ashley River.

System Components Inspected	Yes	No
Chlorinator Chlorine Tablets	X	
Other Chemicals in Use No Dechlorination		X
Aerators	X	
Plant fenced and Locked	X	
Warning Signs Visible	X	
Holes in Fence		X
Erosion of Dikes		X
Odor Sewage Odor	X	
Grass Cut	X	
Duck Weed or Algae		X
Grease Build Up		X
Debris inside of Plant		X
Color of Effluent: Could not evaluate		
Lift Stations: Number 2 pump stations on collection system	X	
Failure Warning System	X	
Electric Wiring Acceptable	X	
Overflows		X
Condition of Access Road: Good/Fair/Poor	Good	
New Construction		X

Frequency Checked by Licensed WWTF Operator: Daily

Location of Utility Office: 110 Queen Parkway, West Columbia, SC, 29169

Location of System: Dorchester County

Subdivision provided water by this Utility: No (Summerville DPW)

Comments: The WWTF has 2 separate treatment systems. Wastewater is received via a single influent pipe and separated on-site to be treated in one of the two treatment systems. Leakage of sewage from an area around the pipe discharging the effluent from one of the treatment tanks is occurring at the treatment tank. The flow from the two treatment systems are then merged before entering the flow metering

7

CWS Comments: The leakage noted on the treatment effluent and at the flow metering chamber has been repaired. The seepage at these locations did not affect any aspects of the treatment or flow measurement processes.

chamber. The flow metering chamber has cracks. Cracks in the flow metering unit are causing treated sewerage to be released prematurely. The final discharge is an intermittent discharge from a wet well located at the WWTF. The formal discharge point is located approximately 1/10 mile downstream on Ashley River. The storage/office building at the WWTF needs a new roof. Possible future interconnection with Dorchester County. The system has a total residual chlorine (TRC) limit. Because the wastewater is not dechlorinated, the WWTF continuously fail its TRC limit.

Sewage odor existed around the interior of the fence for the wastewater treatment facility (WWTF). However, we were unable to walk the entire outside perimeter of the fence around the WWTF due to the heavy vegetative growth.

CWS Comments: 1) Repairs to the storage/office building are currently underway and are anticipated to be completed by May 3rd.

8

2) The TRC limit was not met previously due to DHEC's previous position to not issue a construction permit. This was due to the on-going TMDL Study for the Ashley River. CWS will be required to upgrade the WWTP should a bulk sewer agreement from Dorchester County be disapproved. We have yet to receive a signed agreement from the County for submittal.

3) Additional aerator upgrades are scheduled to be installed in order to enhance our odor control efforts. This was initiated following the public hearing held on April 18 in Summerville, SC and in direct response to customer concerns (complaints ?).



ORS WASTEWATER SYSTEM INSPECTION

Utility Name: Carolina Water Service, Inc. Number of Customers: ~265
System Type: Collection and Treatment System Date Inspected: April 6, 2005
Inspected By: Willie Morgan/Barry Morris Subdivision Name: Lincolnshire
Office of Regulatory Staff Georgetown County
Company Representative: Mr. Dana L. Reeder

Type of Plant: Collection and Treatment System

Extent of Treatment: Collection and treatment in aboveground compartmentalized tank with discharge to an unnamed tributary

System Components Inspected	Yes	No
Chlorinator Chlorine Gas	X	
Other Chemicals in Use No Dechlorination		X
Aerators	X	
Plant fenced and Locked	X	
Warning Signs Visible	X	
Holes in Fence		X
Erosion of Dikes		X
Odor		X
Grass Cut	X	
Duck Weed or Algae	X	
Grease Build Up		X
Debris inside of Plant		X
Color of Effluent: Clear		
Lift Stations: Number 1 pump station on collection system	X	
Failure Warning System	X	
Electric Wiring Acceptable	X	
Overflows		X
Condition of Access Road: Good/Fair/Poor	Good	
New Construction		X

Frequency Checked by Licensed WWTF Operator: Daily (1 main person & a part-time person)

Location of Utility Office: 110 Queen Parkway, West Columbia, SC, 29169

Location of System: Georgetown County

Subdivision provided water by this Utility: No (Georgetown Water and Sewer District)

Comments: Wastewater is received at the WWTF and then pumped up into the compartmentalized treatment tank (aeration, clarifier, & digester). The treatment tank was recently sandblasted and painted (completed on Tuesday, April 5, 2005). Only single family homes are on the system. In general, the homes are low income homes. CWS has had sewer payment problems with the customers in this area of

their system. The system is over 20 years old and has mostly clay pipes for the collection system. Water infiltration is a problem for the collection system. The flow from the treatment system is then discharge to an unnamed tributary. Possible future interconnection with Georgetown Water and Sewer District. The system has a total residual chlorine (TRC) limit. Because the wastewater is not dechlorinated, the WWTF continuously fail its TRC limit. A 60KV emergency generator will be installed. The capacity of the WWTF is 125k gallon per day.

CWS Comments: 1) CWS continues work on its I/I programs. Over the last 2 years, approximately 95% of the sewer collection system has been televised to locate possible sources of infiltration. Follow-up smoke testing is scheduled to identify other possible sources of infiltration. Remedial repairs will be undertaken in portions of the collection system as areas of infiltration are identified along with investigation of large-scale sewer line rehabilitation or replacement.

2) Upgrades are planned within the next several years in accordance with our recently-issued NPDES Permit. TRC limits will be addressed during these upgrades. DHEC had previously denied issuance of a permit for the installation of dechlorination equipment submitted by CWS. Therefore, any failures of the TRC limit were not caused by CWS.



ORS WASTEWATER SYSTEM INSPECTION

Utility Name: Carolina Water Service, Inc. Number of Customers: -30
System Type: Collection and Transfer Date Inspected: March 17, 2005
Inspected By: Willie Morgan/Barry Morris Subdivision Name: Mallard Cove, Seay Cove
Office of Regulatory Staff
Company Representative: Mr. Dana L. Reeder
Mr. Robert Gilroy
Type of Plant: Collection and transfer (1 lift station pumps wastewater to Watergate (Lands End))
Extent of Treatment: 1 Pump Station

System Components Inspected	Yes	No
Chlorinator		X
Other Chemicals in Use		X
Aerators		X
Plant fenced and Locked	X	
Warning Signs Visible	X	
Holes In Fence		X
Erosion of Dikes		X
Odor		X
Grass Cut	X	
Duck Weed or Algae		X
Grease Build Up		X
Debris inside of Plant		X
Color of Effluent: Did not evaluate		
Lift Stations: Number 1	X	
Failure Warning System	X	
Electric Wiring Acceptable		X
Overflows		X
Condition of Access Road: Good/Fair/Poor	Good	
New Construction		X

Frequency Checked by Licensed WWTF Operator: Daily

Location of Utility Office: 110 Queen Parkway, West Columbia, SC, 29169

Location of System: Lexington County

Subdivision provided water by this Utility: Yes

Comments: The electrical conduit needs to be reconnected.

CWS Comments: The electrical conduit was repaired following the inspection by ORS.



ORS WASTEWATER SYSTEM INSPECTION

Utility Name: Carolina Water Service, Inc. Number of Customers: ~85
System Type: Collection and Treatment System Date Inspected: March 17, 2005
Inspected By: Willie Morgan/Barry Morris Subdivision Name: Smallwood
Office of Regulatory Staff Lexington County
Company Representative: Mr. Dana L. Reeder
Mr. Robert Gilroy
Type of Plant: Collection and Biological Treatment System
Extent of Treatment: Biological Treatment with Discharge to Sprayfield using no discharge permit (ND0007994)

System Components Inspected	Yes	No
Chlorinator	X	
Other Chemicals in Use		X
Aerators (4 = 3 in oxidation area + 1 in polishing area)	X	
Plant fenced and Locked	X	
Warning Signs Visible	X	
Holes in Fence		X
Erosion of Dikes		X
Odor		X
Grass Cut	X	
Duck Weed or Algae		X
Grease Build Up		X
Debris inside of Plant		X
Color of Effluent: Did not evaluate		
Lift Stations: Number 1	X	
Failure Warning System	X	
Electric Wiring Acceptable	X	
Overflows		X
Condition of Access Road: Good/Fair/Poor	Good	
New Construction	X	

Frequency Checked by Licensed WWTF Operator: Daily

Location of Utility Office: 110 Queen Parkway, West Columbia, SC, 29169

Location of System: Lexington County

Subdivision provided water by this Utility: Yes

Comments: There are no upgrades planned. However, the 20-acre sprayfield was being repaired. Only one aerator was being used in the primary (oxidation) area of the lagoon. The lagoon is divided within by a curtain.

CWS Comments: Repairs/replacement of the 20-acre sprayfield was recently completed at a cost exceeding \$22,000.

ORS WASTEWATER SYSTEM INSPECTION



ORS WASTEWATER SYSTEM INSPECTION

Utility Name: Carolina Water Service, Inc. Number of Customers: ~1233
System Type: Collection and Treatment System Date Inspected: March 17, 2005
Inspected By: Willie Morgan/Barry Morris Subdivision Name: Watergate (Lands End),
Office of Regulatory Staff Harborside - Lexington County
Company Representative: Mr. Dana L. Reeder
Mr. Robert Gilroy
Type of Plant: Collection and Biological Treatment System
Extent of Treatment: Biological Treatment with Surface Water Discharge using NPDES permit
(SC0027162)

System Components Inspected	Yes	No
Chlorinator	X	
Other Chemicals in Use (sulfur dioxide)	X	
Aerators	X	
Plant fenced and Locked	X	
Warning Signs Visible	X	
Holes in Fence		X
Erosion of Dikes		X
Odor	X	
Grass Cut	X	
Duck Weed or Algae		X
Grease Build Up		X
Debris inside of Plant		X
Color of Effluent: Did not evaluate		
Lift Stations: Number 2	X	
Failure Warning System	X	
Electric Wiring Acceptable	X	
Overflows		X
Condition of Access Road: Good/Fair/Poor	Good	
New Construction		X

Frequency Checked by Licensed WWTF Operator: Daily

Location of Utility Office: 110 Queen Parkway, West Columbia, SC, 29169

Location of System: Lexington County

Subdivision provided water by this Utility: Yes

Comments: There have been odor complaints. An odor scrubber has been installed for the 100k gallon equalization basin and static bar screen. The effluent is discharged to the 14 Mile Creek which is located approximately 5 1/2 miles away. Planned upgrades to the WWTF include painting, corrosion repair on grates on treatment tank, and several odor abatement devices or equipment.

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CWS Comments: Order control equipment has been installed on April 21, 2005. A vapor-phase odor neutralizer system is on-line to further enhance our odor control program. In addition, upgrades to the aeration equipment, including the EQ Basin, aeration chamber, and sludge digesters are currently underway. Additional odor control devices are on order for installation in the EQ Basin once modifications have been completed in approximately the next 30 days.



ORS WATER SYSTEM INSPECTION

Utility Name: Carolina Water Service, Inc.

Number of Customers: ~203

System Type: 2 Wells

Date Inspected: March 16, 2005

Inspected By: Willie Morgan/Barry Morris
Office of Regulatory Staff

Subdivision Name: Blue Ridge Terrace - 50 cust.
Heatherwood - 125 cust./Calvin Acres - 25 cust.

Company Representative: Mr. Dana L. Reeder
Mr. Robert Gilroy

Type of Plant: 2 Wells [Well #1 - 20k gallon tank and Well #2 - 15k gallon tank]

Extent of Treatment: Well #1 - chlorination with lime for pH adjustment, Well #2 - chlorination with soda ash for pH adjustment.

System Components Inspected	Specific Type	Total #	PSI	Capacity	Compliance		Comments
					Yes	No	
Well Sites	bored	2			X		
Pump Houses	masonite	2				X	#1 needs repair, #2 being repaired
Storage Tank(s)	metal						
	Pressurized	2		20k/15k	X		
	Non-Pressurized						
	Overhead						
Chlorinator		2			X		
Meters					X		
Fire Hydrants		0					
Electrical Wiring					X		
Exposed Pipe					X		
Air in Lines							Did not evaluate
Sand in Water							Did not evaluate
Clarity of Water							Did not evaluate
Leaks							None observed on system
Odor							None observed on system
Condition of Access Road:					X		
New Construction					X		#2 well house was being upgraded

Frequency Checked by Licensed Operator: Daily

Location of Utility Office: 110 Queen Parkway, West Columbia, SC, 29169

Subdivision provided wastewater service by this Utility: No (homes are on septic)

CWS Comments: Repairs to both wellhouses have been completed.

Comments: Well #1 is located in Calvin Acres S/D. Well #2 is located in Heatherwood S/D. Well house in Heatherwood was being repaired along with well piping. Well house in Calvin Acres is scheduled to be repaired.

CWS Comments: 1) The Heatherwood wellhouse has been repaired, including piping, electrical, and the installation of a by-pass line on the storage tank.

2) The Calvin Acres wellhouses has been repaired, including piping work as well.



ORS WATER SYSTEM INSPECTION

Utility Name: Carolina Water Service, Inc. Number of Customers: ~204
 System Type: 2 Wells Date Inspected: March 16, 2005
 Inspected By: Willie Morgan/Barry Morris Subdivision Name: Hidden Valley Estates - Gaston
 Office of Regulatory Staff Lexington County
 Company Representative: Mr. Dana L. Reeder
 Mr. Robert Gilroy
 Type of Plant: 2 Wells [1 - 75k gallon tank on site of Well #1]

Extent of Treatment: Well #1 - chlorination with soda ash for pH adjustment, Well #2 - chlorination with soda ash for pH adjustment. Soda ash (sodium hypochlorite - 79 gal tank).

System Components Inspected	Specific Type	Total #	PSI	Capacity	Compliance		Comments
					Yes	No	
Well Sites	bored	2			X		
Pump Houses	masonite	2				X	#1 needs repair, #2 needs repair
Storage Tank(s)	metal						
	Pressurized						
	Non-Pressurized	1		75k	X		Elevated tank
	Overhead						
Chlorinator		2			X		
Meters					X		
Fire Hydrants		~12					
Electrical Wiring					X		
Exposed Pipe					X		
Air in Lines							Did not evaluate
Sand in Water							Did not evaluate
Clarity of Water							Did not evaluate
Leaks							None observed on system
Odor							None observed on system
Condition of Access Road:					X		
New Construction					X		

Frequency Checked by Licensed Operator: Daily

Location of Utility Office: 110 Queen Parkway, West Columbia, SC, 29169

Subdivision provided wastewater service by this Utility: No (homes are on septic)

Comments: Well #1 is located on site of 75k gallon elevated storage tank. Well #2 is located across the street from well #1.

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CWS Comments: 1) Repairs and scheduled maintenance are currently underway at the elevated storage tank, including the installation of safety climb equipment. The interior and exterior of the tank are due to be painted and are scheduled to be completed within approximately the next 30 days.

2) Both well buildings have been repaired.



ORS WATER SYSTEM INSPECTION

Utility Name: Carolina Water Service, Inc.

Number of Customers: -93

System Type: 3 Wells

Date Inspected: March 16, 2005

Inspected By: Willie Morgan/Barry Morris
Office of Regulatory Staff

Subdivision Name: Hunters Glen - Aiken

Company Representative: Mr. Dana L. Reeder
Mr. Robert Gilroy

Type of Plant: 3 Wells [Well #1 - 12k and 16k gallon tanks, Well #2 - 100 gallon pneumatic tank, Well #3 - 80 gallon tank]

Extent of Treatment: Well #1, #2, #3 - chlorination with soda ash for pH adjustment. Soda ash (sodium hypochlorite).

System Components Inspected	Specific Type	Total #	PSI	Capacity	Compliance		Comments
					Yes	No	
Well Sites	bored	3				X	#2 fence needs tree removed
Pump Houses	masonite	3			X		#1 being repaired
Storage Tank(s)	metal						
	Pressurized	3			X		
	Non-Pressurized						
	Overhead						
Chlorinator		3			X		
Meters					X		
Fire Hydrants		0					
Electrical Wiring					X		
Exposed Pipe					X		
Air in Lines							Did not evaluate
Sand in Water							Did not evaluate
Clarity of Water							Did not evaluate
Leaks							None observed on system
Odor							None observed on system
Condition of Access Road:					X		
New Construction					X		

Frequency Checked by Licensed Operator: Daily

Location of Utility Office: 110 Queen Parkway, West Columbia, SC, 29169

Subdivision provided wastewater service by this Utility: No (homes are on septic)

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CWS Comments: 1) The tree noted at #2 fence is being removed.

2) Wellhouse #1 has been repaired and all facilities, including tanks and buildings have been painted.

Comments: Well #1 needs sign and telephone number on fence. Construction work is being done, but not complete. Pump at Well #1 will be moved inside a house. Well #2 has tree in fence that needs to be removed.

CWS Comments: 1) The appropriate company sign was replaced.

2) Construction work has been completed.

Comments: System has elevated tank at small office. It needs repairing. Gate for fence was not closed or locked. Inside the fence is the small office, 100k gallon elevated tank, 2 generators on wheels, and a 99 gallon gas tank on wheels.

CWS Comments: The gate has been locked and equipment has been secured to prevent unauthorized use. A separate walk-thru gate has since been installed and is kept secured.



ORS WATER SYSTEM INSPECTION

Utility Name: Carolina Water Service, Inc.

Number of Customers: -30

System Type: 1 Well

Date Inspected: March 17, 2005

Inspected By: Willie Morgan/Barry Morris
Office of Regulatory Staff

Subdivision Name: Mallard Cove & Seay Cove
Lexington County

Company Representative: Mr. Dana L. Reeder
Mr. Robert Gilroy

Type of Plant: 1 Well - 2k gallon storage tank

Extent of Treatment: Chlorination and phosphate for pH adjustment.

System Components Inspected	Specific Type	Total #	PSI	Capacity	Compliance		Comments
					Yes	No	
Well Sites		1					Bulk from City of West Columbia
Pump Houses		1					
Storage Tank(s)	metal						
	Pressurized	1		2k			
	Non-Pressurized						
	Overhead						
Chlorinator		1					
Meters					X		
Fire Hydrants		0					
Electrical Wiring					X		
Exposed Pipe					X		
Air in Lines							Did not evaluate
Sand in Water							Did not evaluate
Clarity of Water							Did not evaluate
Leaks							None observed on system
Odor							None observed on system
Condition of Access Road:					X		
New Construction							None observed on system

Frequency Checked by Licensed Operator: Daily

Location of Utility Office: 110 Queen Parkway, West Columbia, SC, 29169

Subdivision provided wastewater service by this Utility: Yes

Comments: Well house needs repairing including roof. This has been proposed. Replacement tank plans were scheduled to be submitted to DHEC on tomorrow. The new tank will be 7.5k gallons.

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CWS Comments: 1) Wellhouse has been repaired.

2) The new, larger hydro-tank is currently on order and scheduled to be delivered approximately mid-May for installation.



ORS WATER SYSTEM INSPECTION

Utility Name: Carolina Water Service, Inc.

Number of Customers: ~169

System Type: 2 wells

Date Inspected: March 17, 2005

Inspected By: Willie Morgan/Barry Morris
Office of Regulatory Staff

Subdivision Name: Smallwood
Lexington County

Company Representative: Mr. Dana L. Reeder
Mr. Robert Gilroy

Type of Plant: 2 Wells [One 15k gallon tank]

Extent of Treatment: Wells - chlorination with soda ash for pH adjustment. Soda ash (sodium hypochlorite). Softener is added to water.

System Components Inspected	Specific Type	Total #	PSI	Capacity	Compliance		Comments
					Yes	No	
Well Sites	bored	2			X		
Pump Houses	masonite	1			X		
Storage Tank(s)	metal						
	Pressurized	1			X		
	Non-Pressurized						
	Overhead						
Chlorinator		1			X		
Meters					X		
Fire Hydrants		0					
Electrical Wiring					X		
Exposed Pipe					X		
Air in Lines							Did not evaluate
Sand in Water							Did not evaluate
Clarity of Water							Did not evaluate
Leaks							None observed on system
Odor							None observed on system
Condition of Access Road:					X		
New Construction							None observed on system

Frequency Checked by Licensed Operator: Daily

Location of Utility Office: 110 Queen Parkway, West Columbia, SC, 29169

Subdivision provided wastewater service by this Utility: Yes

Comments: No upgrades planned. The two wells are located in the woods behind the well house and tank.

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CWS Comments: #1 well has a water softener for additional treatment.